

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-6 (canceled)

Claim 7 (previously presented): A method for synthesizing a polysialic acid product having alternating  $\alpha$ 2,9- and  $\alpha$ 2,8 linkages of sialic acid, said method comprising the following step:

Step A: contacting a sialic acid acceptor and a CMP-sialic acid donor with released  $\alpha$ 2,8/2,9 polysialyltransferase under aqueous conditions for sequentially sialylating the sialic acid acceptor with the CMP-sialic acid donor for releasing CMP and forming the polysialic acid product;

wherein the released  $\alpha$ 2,8/2,9 polysialyltransferase is released into an aqueous phase.

Claim 8 (previously presented): A method according to claim 7 wherein the sialic acid acceptor is selected from the group consisting of sialic acid, an oligomer of sialic acid, and a ganglioside.

Claim 9 (previously presented): A method according to claim 7 wherein the sialic acid acceptor is selected from the group consisting of sialic acid, a dimer or trimer of sialic acid, 9-O-acetyl sialic acid, GD<sub>3</sub>, GM<sub>3</sub>, GD<sub>2</sub>, GT<sub>1a</sub>, GT<sub>1b</sub>, GQ<sub>1b</sub>, and a ganglioside

mixture.

Claim 10 (previously presented): A method according to claim 7 wherein the released  $\alpha$ 2,8/2,9 polysialyltransferase is from *Escherichia coli* K92.

Claim 11 (previously presented): A method according to claim 7 further comprising the following step:

Step B: removing the released CMP of said Step A with alkaline phosphatase.